Flanders/FFI®

FOREMOST IN AIR FILTRATION

Alpha HT

High Temperature HEPA Filters

Bulletin PB1403-0107

General

Flanders manufactures metal-frame separator-style HEPA filters for applications with high-temperature requirements up to 1,000°F (540°C) for exhaust air only and 500°F (260°C) for supply air. High-temperature filters are available with either a gasket or fluid seal. Filters with Blu-Jel® Fluid Seal have a maximum service temperature of 390°F (199°C)

HEPA Filters

Each HEPA filter has a minimum efficiency of 99.97% on 0.30 micrometer size particles when tested at rated capacity on a Q-107 Penetrometer. Each filter is challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size and by measuring the upstream and downstream concentration of these particles with a light scattering photometer, the penetration can be determined and the efficiency can be calculated.

Scan Tested HEPA Filters

Each Scan Tested HEPA filter has a minimum efficiency of 99.99% on 0.30 micrometer particles. Scan testing is in accordance with Section 6.2 of IEST-RP-CC034.1, HEPA and ULPA Filters Leak Tests. In the scan test, the filter is challenged with a high concentration of an approved oil aerosol or PSL (Polystyrene Latex Spheres). The media pack and pack-to-frame seal is scanned using a photometer or particle counter to insure that there are no leaks greater than .01% of the upstream concentration at 100 fpm face velocity. Scan testing is only available for the 500°F model.

Sealant Types

Two types of sealants for high-temperature HEPA filters are offered.

Silicone Sealant

This is a high temperature (RTV) silastic-sealant silicone compound rated for continuous service up to 500°F(260°C). NOTE: This high-temperature sealant is not UL 586 approved.

Glass Pack Sealant For Exhaust Air Only

The glass pack seal is rated for continuous service up to 1,000°F(540°C) in exhaust air applications only. It is a mat of submicron glass fibers that creates a seal when compressed between the filter pack and filter frame. The glass packing is not an adhesive seal but a mechanical seal that functions much as the glass fiber medium of the filter itself.

NOTE: Due to the possibility that the glass pack may shed glass fibers, the glass pack sealant should be used for exhaust systems only.

Alpha HT Filter Dimensions and Capacities

CFM CAPACITIES AND DIMENSIONS

Filter Depth (Inches)	Filter Size and Frame Depth Designator	Actual Face Size (Inches)	CFM Capacity at Clean Pressure Drop, Inches w.g. .65	1.0	1.35	Weight (Lb.)
11-1/2	GG-F	24x24	650	1000	1300	38
	GC-F	24x12	300	455	590	26
	YY-F`	23-3/8x23-3/8	615	945	1235	37
	YU-F	23-3/8x11-3/8	275	425	550	25
	GN-F	24x30	830	1275	1655	45
	CC-F	12x12	135	205	265	14

ALPHA HT COMPONENT CHART

0 - 007 - C - 02 - 03 - IE - 32 - 00 - GG - F

Hardware
O = None
T = Extractor Clips

Efficiency
007 = 99.97% DOP
99.99% on .30 micrometers=SU Sealant

Capacity / Pack Style
C = Separator

Frame Material
02 = 16 GA 409 Stainless
03 = 16 GA 304 Stainless

Frame Style
03 = Double-Turned Flange
05 = 3/4 in. Deep Channel

Sealant Material
IE = High Temperature Silicone
IG = Ceramic and Glass Mat
SE = high Temperature Silicone Scan Tested (99.99% on 0.30 micrometers)

Gasket Material
0 = None
3 = Silicone Sponge
4 = Woven Glass
5 = Blu Jel

Gasket Location
0 = None
1 = Upstream
2 = Downstream
3 = Both Sides

Faceguard Material
0 = None
G = Aluminized Expanded Metal
5 = 22GA.SS 4x4 Mesh

Faceguard Location
0= None
1 = Upstream
2 = Downstream
3 = Both

Filter Face Size (H x W)

B=8”	N=30”	R=6
C=12”	P=36”	S=72”
E=18”	H=42”	U=113/8
G=24”	Q=48”	Y=23 3/8

Filter Depth
D = 5-7/8
F = 11-1/2

ODD Size Designator

Odd size designators are an alpha numeric description. The first two digits specify the height whole number with an alpha designator specifying the height fraction. The second two digits specify the width whole number with an alpha designator specifying the width fraction. And the last alpha designator specifies the depth. If he height or width is less than 10 inches, use a 0 in front of the dimension.

A = O”	E=1/4”	J=1/2”	N=3/4”
B=1-1/16”	F=5/16”	K=9/16”	P=13/16”
C=1/8”	G=3/8”	L=5/8”	Q=7/8”
D=3/16”	H=7/16”	M=11/16”	R=15/16”

Guide Specifications

1.0 General

1.1 High temperature separator style HEPA filters shall be Alpha HT models as manufactured by Flanders.

1.2 Filter sizes, capacities and construction options shall be as scheduled on the drawings.

2.0 Filter Construction

2.1 The filter pack shall be constructed by pleating a continuous sheet of non-woven water-resistant fiberglass media around hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be sealed into a (409 stainless steel) (304 stainless steel) frame with a high temperature silicone sealant rated for 500°F or a glass pack sealant rated for 1,000°F in exhaust applications.

2.3 (A chlorastic silicone gasket) (a woven glass gasket) shall be provided to seal the filter in the mounting device (Gasket Seal). A silicone gel shall be provided in a channel on one side to seal the filter in the mounting device. filters with silicone gel have a maximum service temperature of 390°F (Gel Seal)

3.0 Performance

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Alpha HT HEPA Filters shall have a minimum efficiency of 99.97% on 0.30 micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type A. Each filter shall be challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size. Measure the upstream and downstream concentration of these particles with a light scattering photometer, determine the penetration and calculate the efficiency.

3.3 Alpha HT Scan Tested HEPA Filters shall have a minimum efficiency of 99.99% on0.30micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type C. The scan test shall consist of challenging the filter with a high concentration of an approved oil aerosol or PSL Spheres. Utilizing a photometer or particle counter, the media pack and the pack-to-frame seal shall be scanned to insure that there are no leak greater than .01% of the upstream concentration at 100 fpm face velocity.

Flanders/FFI ®
Flanders Filters, Inc.
531 Flanders Filter Road
Washington, NC 27889

Phone: (252) 946-8081
Toll Free: (800) 637-2803
Fax: (252) 946-3425

Website: www.flanderscorp.com

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